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Ref :

Applicant/Appellant : Allan Todd Berry

Serial No.: 10/657,977

Filed: 09/09/2003

For: Process to Electronically Automate the Sorting of Chicken Feet in the Category of Edible or Inedible

Examiner: David J Parsley

Group Art Number: 3643

**Re-Submitted Appeal Brief by Inventor/ Appellant**  
**of Obvious Rejection under 35 USC sec 103 (a) of Patent Application**

Board of Patent Appeals & Interferences  
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P.O. Box 1450  
Alexandria, VA 22313-1450

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GROUP 3600

In response to the Office Action dated 3/13/06 ("Office Action"),  
Inventor/Appellant appeals the rejection surrounding the obviousness issue under 35 USC  
sec. 103 (See PTO's response numbers 3 – 4 in Office Action).

(i) **Real Party in Interest**

Allan Todd Berry, the inventor, is the real party in interest.

(ii) **Related Appeals and Interferences**

There are no related appeals, interferences, or judicial proceedings.

(iii) **Status of Claims**

Claims 1 through 23 have been canceled. Claims 24 and 25 have been rejected by the PTO in the latest Office Action. Appellant has amended Claims 24 and 25 to correct the rejection of lack of antecedent basis under 35 USC sec. 112 (See Office Action item 2). The PTO has accepted such amendment of the Appellant's claims to correct such antecedent basis' rejection. Appellant is appealing the rejection of Claims 24 and 25 for the rejection based on 35 USC 103 (a). That is the only outstanding issue for resolution. In the event the ruling is in favor of Appellant then Claims 24 and 25 will be allowed and the Patent Application would be ready for issuance.

(iv) **Status of Amendments**

Appellant has filed an amendment, subsequent to Office Action and final rejection, to correct the rejection regarding lack of antecedent basis under 35 USC 112. Such amendment does not broaden the claims or change the substance of the claims in any way. The PTO has accepted such amendment.

(v) **Summary of Claimed Subject Matter**

Appellant's invention is for a process to electronically automate the sorting of chicken feet in the category of edible or inedible. There are two independent claims, one

for the apparatus and one for the process (*See*, Claims Appendix). Claim 24 is for an apparatus claim and Claim 25 is for the process claim.

**A Mapping of the Claimed Subject Matter to Each Independent Claim**

**The Independent Claims are : Claim 24 and Claim 25 (which are the only Claims outstanding and subject to this Appeal)**

For a summary of the claimed subject matter defined by the independent Claims 24 and 25 (the only claims outstanding and subject to this appeal), Appellant relies on the published Patent Application, marked as Exhibit A, and the drawing (Fig.1 which is part of such Patent Application) which are attached hereto.

In Claims 24 and 25, Appellant's invention comprises an industrial programmable logic controller (PLC) which receives input data from photoelectric and inductive sensors located at various locations on the picking and eviscerating lines (these are chicken lines that contain chicken feet and associated chicken body, respectively). (*See*, page 2, column B, section 0026, lines 51 – 57). These are the first two elements (the sensors and PLC) recited in both Claims 24 and 25. In the drawing (Fig. 1), the PLC is depicted as item number 2 and the sensors (which are placed along the picking and eviscerating lines) are depicted as items 4 and 6.

The PLC has been programmed with an electronic model of the chicken line(s) process. The photoelectric sensors monitor line movement and verify the presence of chickens in shackles. The inductive sensors monitor trolley movement on the automatic rechanger. These sensors send signals back to the PLC via data bus communications. (*See*, page 1, column B, section 0008, lines 19 – 28). The means to communicate between the PLC and the sensors (as claimed in the independent Claims 24 and 25) is the data bus

communications cable. This communication means between the sensors and the PLC is the third element of Claims 24 and Claims 25 as they are recited in such Claims. The PLC, as stated, is depicted as item 2 in the drawing (Fig. 1) and the bus cable is not depicted. (See, page 3, column A, section 0026, lines 1 -2).

The inspector reject button is the fourth element of Claims 24 and 25 as they are recited in Claims 24 and 25. The invention also monitors the presence of the chickens directly before the inspector station locations. There are inspector locations located along the chicken lines. (See, page 2, column A, section 0011, lines 13 -14). If the chicken feet are determined to be inedible, the inspector will press a button located at the inspector's station. This button interfaces with the electronic programmable logic card system and then the system identifies the ID of the whole bird and locates the associated chicken's feet on the picking line and the status of the chicken feet will be electronically set to "inedible." (See, page 2, column A, section 0011, lines 22 -26). The inspector reject button is not specifically depicted on the drawing but as stated, it is the fourth element recited in Claims 24 and 25.

The last elements recited in Claims 24 and 25 (the independent Claims and the only ones outstanding and subject to this Appeal) are the metal flags which are attached to the shackles. There are metal flags attached to the trolleys (except one) and there are large metal flags attached to one shackle on each picking and eviscerating lines. (See, page 2, column A, section 0013, lines 33-35). The flags allow for the electronic monitoring of the system. (See, page 2, column A, section 0013, lines 35 - 38). The metal flags are depicted as item 22 on drawing (Fig. 1).

(vi) **Grounds of Rejection to be Reviewed on Appeal**

**The only ground of rejection outstanding by the Examiner of Claims 24 and 25 is that Such Claims are Obvious under 103 (a)**

The only ground for rejection, at this point, by the PTO is that both Claims 24 and 25 are obvious under 103(a). *Since this ground of rejection applies to both Claims 24 and 25, the Claims 24 and 25 will be argued as a group and not separately argued.*

Appellant appeals the rejection by the PTO of Claims 24 and 25 due to such claims being “obvious” under 35 USC sec. 103(a). Appellant appeals such decision based on four (4) reasons:

- (a) Several of the documents relied on by the PTO should not be considered “prior art.”
- (b) The PTO has shown no basis to combine the documents cited as “prior art” as to make Appellant’s invention “obvious.”
- (c) The PTO does not take into account the secondary considerations, such as “commercial success,” of Appellant’s claimed invention.
- (d) If the documents are to be viewed as “prior art,” the documents still do not disclose all the elements of Appellant’s invention.

(vii) **Argument**

**Appellant Argues the Ground of Rejection of Obviousness under 103 (a) as applied to Claims 24 and 25 as a Group, Not Separately**

**THE ARGUMENT BELOW APPLIES TO CLAIMS 24 AND 25:**

**(a) Documents Presented by PTO Not all Prior Art**

The first step in the Graham test requires one to determine the scope and content of the prior art. The test to determine what is and is not prior art is explained in the case In re Clay, 966 F. 2d 656, 23 USPQ 2d 1058 (Fed. Cir. 1992). Clay's patent application concerned a process for storing refined liquid hydrocarbon product in a storage tank having a dead volume between the tank and its outlet port. The process involved the placement of a gelatin solution into the tank's dead volume and later allowed the solution to gel. According to Clay, the addition of a gel-degrading agent would allow the gel to be readily removed from the tank. The PTO rejected Clay's application under section 103(a) in part due to a reference to Syndansk. Syndansk called for the introduction of a similar gel into the underground, natural, oil-bearing formation in order to better channel oil flow during extraction.

The issue was whether the Syndansk patent should be considered prior art in applying section 103(a) to Clay's application. The test to determine what is "prior art" developed in In re Clay, 966 F. 2d 656, 23 USPQ 2d 1058 (Fed. Cir. 1992) was, as follows: (1) whether the art is from the same field of endeavor; and (2) if not, is the document or art reasonably pertinent to the particular problem with which the inventor is trying to solve.

Applying the two (2) part test to Clay's application, the Court found: (1) Syndansk is not from the same field of endeavor. Syndansk addressed the use of gel in unconfined, irregular volumes of natural subterranean formations, in extreme conditions; Clay, instead, manipulated the confined, dead volume of an artificial storage tank under

ordinary atmospheric conditions. (2) And, Syndansk was found not to be reasonably pertinent to the particular problem with which the inventor is trying to solve. Syndansk dealt with the removal of oil from rock, while Clay's invention dealt with removal of oil from a storage tank. As the problem of Clay involved dissimilar structures and working conditions, the conclusion was that a person of ordinary skill would not have been led to consult the Syndansk patent for information bearing on the problem that Clay was trying to solve.

In this matter, the purpose of Appellant's invention is to track a chicken body and associated chicken feet using electronic means (a programmable logic card and sensors that feed information to the programmable logic card), and in the event the chicken feet are rejected by an inspector, then an inspector can push a button that rejects both the chicken feet and associated chicken body (the inspector button interfaces with the programmable logic card). The primary aspect of Appellant's invention, then, is to match the chicken feet to the chicken body when the two are divided.

In applying the two part test from In re Clay to this matter, the German patent DE 4132830, cited by the PTO, deals with providing a machine-readable marking to hooks in a slaughterhouse to identify a suspended carcass. The purpose of the German patent is to identify a carcass using a machine readable label attached to a hook. The purpose of this German patent is not, like the current invention, to match a chicken body to chicken feet by means of sensors and a programmable logic card. The problem solved by the German patent is to determine where the carcass is in the process. The problem solved in Appellant's invention is to match a chicken body to its associated chicken feet. The German patent does not deal with matching the carcass to any other part.

Applying the two (2) part test of Clay to this, one concludes: (1) the two inventions are not from the same field of endeavor – the German patent deals with using a machine-readable marking on a hook and Appellant's invention deals with using sensors and a programmable logic card; and (2) the two inventions are not trying to solve the particular problem with which the inventor is dealing with – the German patent is trying to solve where the carcass is in the process while Appellant's invention is dealing with the problem of matching a chicken body to its associated chicken feet.

Thus, applying the two (2) part Clay test, the German patent should not be considered prior art.

The second patent that should not be considered as prior art, under the Clay test, is the patent to Linville, U.S. Patent No. 4,372,099. The purpose of the Linville invention is to aid in the packing of poultry. The problem that Linville attempts to solve is determining an accurate weight of the poultry so as to accurately and effectively pack the poultry. The Linville invention does this by placing weighing stations throughout the process. Appellant's invention does not involve packing poultry and does not even try to solve the problem of determining the proper weight of the resulting package.

Applying the two (2) part test of Clay to the Linville patent, one concludes: (1) the two inventions are not from the same field of endeavor – the Linville patent deals with using weighing stations throughout the process to determine an accurate reading of the poultry package and Appellant's invention deals with using sensors and a programmable logic card to match a chicken body to its associated chicken feet; and (2) the two inventions are not trying to solve the particular problem with which the inventor is dealing with – the Linville patent is trying to solve a packaging problem while



Appellant's invention is dealing with the problem of matching a chicken body to its associated chicken feet.

Thus, applying the two (2) part Clay test, the Linville patent should not be considered prior art.

Without the German patent and the Linville patent as "prior art" documents, Appellant's invention is un-obvious to one skilled in the art and therefore Appellant's claims 24 and 25 should be allowed.

**b. The Patent Office Examiner has shown no motivation to combine all the prior references**

Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains and must be analyzed from the standpoint of the invention *as a whole*, not the individual parts. See 35 U.S.C. sec. 103(a) (emphasis supplied).

"Virtually all [inventions] are combinations of old elements." Environmental Designs, Ltd. v. Union Oil Co., 713 F. 2d 693, 698 (Fed.Cir. 1983). In In Re Rouffet, 149 F.3d 1350, 47 U.S.P.Q. 2d 1453 (1998), it states that an examiner of a claimed invention can often find every element in the prior art, and if identification of each claimed element in the prior art was sufficient to negate patentability, very few patents would ever issue. So, rejecting patent applications solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. That approach would be "an illogical and inappropriate process by

which to determine patentability.” Sensonics, Inc. v. Aerosonic Corp., 81 F. 3d 1566, 1570, 38 U.S.P.Q. 2d 1551, 1554 (Fed. Cir. 1996).

To prevent using hindsight, based on the invention itself, to defeat patentability of the invention, the examiner must show a motivation to combine the references that create the case of obviousness. Grain Processing Corp. v. American Maize-Products Co., 840 F. 2d 902, 5 USPQ 2d 1788 (Fed. Cir. 1988). In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior references for combination in the manner claimed. In Re Rouffet, 149 F.3d 1350, 47 U.S.P.Q. 2d 1453 (1998); MPEP 2142. An examiner cannot use hindsight in selection of references that comprise the case of obviousness.

When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references. See In re Geiger, 815 F. 2<sup>nd</sup> 686, 688 (Fed. Cir. 1987); see, also, In Re Rouffet, 149 F.3d 1350, U.S.P.Q. 2d 1453 (1998).

In this matter, the Patent Office has shown no motivation or suggestion or teaching to combine the prior documents referenced to show obviousness. The PTO bears the burden of establishing a prima facie case of obviousness and it bears the burden of identifying any suggestion, teaching or motivation to combine the prior references. See, In re Dembiczak, 175 F. 3d 994, 50 U.S.P.Q. 2D (BNA) 1614 (Fed. Cir. 1999).

Appellant, whether correct to do so or not, has shown, based on his 20 years of experience, that in his opinion that a person skilled in this art (for which he is) would not

combine the prior art documents (See, Third Affidavit of Allan Todd Berry). But Appellant does not bear such burden, the PTO does.

The courts forbid the use of hindsight in selection of references that comprise the case of obviousness. In this matter, that is what is being done.

The Patent Office has looked at Appellant's patent application and has pieced together elements of other patents (or applications) and concluded that Appellant's invention is obvious. There has been absolutely no showing of a motivation to combine all these different documents to piece together Appellant's invention. So, if there is no motivation to combine all the documents, then Appellant's invention cannot be obvious.

**c. The Patent Office must consider Appellant's evidence of secondary considerations of obviousness or non-obviousness**

In considering the evidence on the obviousness vs. non-obviousness issue, the Courts, even in Graham said (and as other courts have emphasized), it must include evidence on secondary considerations and it is error to exclude that evidence from consideration. Stratoflex, Inc. v. Aeroquip Corp., 713 F. 2d 1530 (1983). The Federal Circuit has instructed that the secondary considerations and objective factors must be considered in every case, both by the courts and PTO. Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 807 F. 2d 955 (Fed. Cir.1986).

The Patent Office states in its last reply that the commercial success does not have a correlation to the claimed invention being novel or non-obvious over the prior art of record. That is not the proper analysis, though. The proper analysis is to determine if there is a connection between the claimed invention and the secondary considerations (such as commercial success), and based on that analysis, does that lead one to conclude

that the invention is non-obvious. Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F. 2d 281 (Fed. Cir. 1985). Notwithstanding the foregoing, Appellant's previously filed Affidavits, state:

- (a) Clearly, the invention is novel and that is not even at issue (See, all previous Affidavits of Allan Todd Berry, in the Evidence Appendix);
- (b) That the invention, as claimed, is a commercial success with over \$ 1.8 million in sales (See, in particular, the Second Affidavit of Allan Todd Berry). Allan Todd Berry, states, in part, in his Second Affidavit, "Those customers are identified in Exhibits 1 and 2. **The invoices total more than \$1.8 million dollars. With over \$1.8 million in sales of my invention, my invention, as the features recited in the claims, is a commercial success.**" (emphasis supplied). The Appellant has always considered his invention to comprise the major components claimed, and the claims (while narrowed over time) have been comprised of, "The elements of the PLC, the sensors, the data bus communications, the medal flags and the inspection interface button." (See, Affidavit of Allan Todd Berry, this was filed prior to the Second Affidavit).

Clearly, the commercial success is based on the claimed invention; it is not based on advertising, superior workmanship, quality of the invention or the company's reputation and there is evidence otherwise.

The commercial success (and other secondary considerations) should be considered as part of the Graham analysis, notwithstanding the prior art filed, unless, of course, the invention is not novel (which is not the case here). It should be part of the non-obvious test, as stated in Graham.

Appellant believes that the secondary considerations are very important to consider, especially in light of the complexity of this invention and the large number of prior art references being relied on by the PTO. In fact, in the case of In Re Rouffet, 149 F.3d 1350, 47 U.S.P.Q. 2d 1453 (1998), it is clear that secondary considerations are essential components of the obviousness determination. This objective test of non-obviousness includes, but is not limited, to: (1) commercial success; (2) satisfying a long felt but unresolved need; (3) failure of others; (4) unexpected properties of the claimed invention and (5) copying or adoption by others.

Appellant's invention satisfies a long felt need in the industry but this has never been considered or addressed by the PTO. Appellant states as follows:

In Appellant's initial Affidavit he states, in part:

"In January of 2002, China began to put restrictions on the quality of the chicken paws they were receiving from the United States. Since then, many poultry processors ceased producing the paws because there was not a viable method for determining the quality of the feet. The invention of the current patent application, in conjunction with the USDA inspectors input, can accurately determine which paws are acceptable and which are not. Therefore, my invention satisfies the need long felt by the poultry industry. It is the only system readily available that meets the criteria of the existing FSIS Directive 6210.2 as it is written." (See, Evidence Appendix).

Appellant believes that if the secondary considerations are considered (which they have not been), then his invention would be viewed as un-obvious.

**d. The "Prior Art" Cited**

As previously stated, Appellant does not believe that all the documents cited by the PTO are prior art and can be combined. In fact, Appellant has shown otherwise. The PTO has not shown any suggestion that these documents can be put together at the time of Applicant's invention to form his invention.

With that said, assuming all these documents are “prior art” document, U.S. Patent No. 4,372,099 to Linville, is for a “method of packing poultry.” Applicant’s invention is for a process to electronically automate the sorting of chicken feet into the category of edible or inedible. Appellant’s invention has nothing to do with determining the weight of poultry in a box like Linville. It should not be used as a prior art document. See, In re Clay, 966 F. 2d 656 (Fed Cir. 1992). But for argument purposes, it makes reference *to only one flag on a shackle*. Appellant’s claims circumvent this objection by claiming more than 1 flag.

No prior art document (or all those combined) depict all the elements claimed in Appellant’s invention. None of the documents depict a flag on more than one shackle.

With respect to U. S Patent No. 4,150,374 to Brook, at a minimum, it does not depict any flags, an inspection station, an inspection button, a programmable communication card and a means to interface to an inspection station to a programmable means. It does depict, admittedly, sensing devices to count whole birds.

With respect to U.S. Patent Application 2003/0139130A1 to Steffler, at a minimum, it does not depict any flags and the inspection button interfacing with a programmable means.

With respect to U.S. Patent Application 2003/0065414 to van den Nieuwelaar et al., it is only cited by the PTO to depict an inspection station that interfaces with a programmable means. It has nothing to do with a process to electronically automate the sorting of chicken feet into the category of edible or inedible like Applicant’s invention.

Last, the German patent (DE 4132830) should not be considered as prior art at all for it depicts no elements claimed in Appellant’s invention.

### **Conclusion to Argument**

Appellant's invention is very complex. The PTO has had to find 5 documents and piece them together to try to show that Appellant's invention is unobvious to one skilled in the art. The obvious test, though, must be viewed against the invention as a whole, and when one has to piece so many documents together, it proves, by definition, the invention is unobvious.

Appellant has shown that several of the prior documents relied on by the PTO are not "prior art." Without such documents, the obvious objection made by the PTO falls like a house of cards.

Appellant has also shown that the documents should not be combined because there has been no showing or suggestion made by the PTO that they should be combined. The PTO has used a hindsight analysis to piece together elements of a number of documents to attempt to show Appellant's invention is obvious. However, if the documents cannot be combined (since there is no suggestion shown to do so), then Appellant's invention is un-obvious to one skilled in the art.

Appellant has provided the PTO evidence of commercial success of the invention and evidence of the invention satisfying a long felt need. This evidence has been related to the invention claimed, not due to marketing, advertising, or the like. The PTO did not exam such evidence because it did not compare (in a limited set of cases) to the art of record. Appellant believes that that is not a proper analysis. So, even if the documents are prior art and even if they can be combined, the invention can still be viewed as unobvious based on these secondary considerations.

Finally, all the documents do not depict the invention as presently claimed and Appellant believes that this is unobvious to those skilled in the art.

Appellant has narrowed his claims and has given an opinion that his invention (and associated claims) are un-obvious to one skilled in his art. Appellant has over 20 years of experience in this art.

For the foregoing reasons, Appellant respectfully requests that his Appeal be granted with the finding that his claims 24 and 25 are not obvious to one skilled in the art and that his claims be allowed.

(viii) **Claims Appendix**

A Claims Appendix is attached hereto.

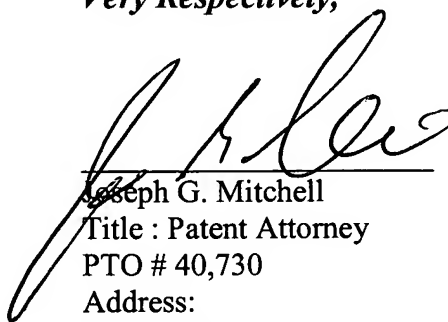
(ix) **Evidence Appendix**

An Evidence Appendix is attached hereto.

(x) **Related Proceedings Appendix**

There are no related proceedings so therefore there is no such appendix.

*Very Respectively,*



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Dated : 10-3-2006



## **Claims Appendix**

**Claim Listing  
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Listing of Claims:

- Claim 1 (canceled).
- Claim 2 (canceled).
- Claim 3 (canceled).
- Claim 4 (canceled).
- Claim 5 (canceled).
- Claim 6 (canceled).
- Claim 7 (canceled).
- Claim 8 (canceled).
- Claim 9 (canceled).
- Claim 10 (canceled).
- Claim 11 (canceled).
- Claim 12 (canceled).
- Claim 13 (canceled).
- Claim 14 (canceled).
- Claim 15 (canceled).
- Claim 16 (canceled).
- Claim 17 (canceled).
- Claim 18 (canceled).
- Claim 19 (canceled).
- Claim 20 (canceled).
- Claim 21 (canceled).

Claim 22 (canceled).

Claim 23 (canceled).

Claim 24 (currently amended): An apparatus to electronically automate the sorting of chicken feet in the category of edible or inedible, comprising:

- sensors including at least one photoelectric sensor and at least one inductive sensor for tracking the chicken bird in a first shackle and chicken feet in a second shackle;

- a programmable logic card to track and store information received by said sensors;

- a means to communicate between said sensors and said programmable logic card;

- at least one inspector reject button communicating with said programmable logic card;

  - a flag on at least one first shackle; and

  - a flag on at least one second shackle.

Claim 25 (currently amended): A process to electronically automate the sorting of chicken feet in the category of edible or inedible, comprising:

- sensing, with at least one photoelectric sensor and at least one inductive sensor, a chicken bird in a first shackle and chicken feet in a second shackle;

- using a programmable logic card to track and store information received by said sensors;

- communicating by a communication means between said sensors and said programmable logic card;

- employing at least one inspector reject button communicating with said programmable logic card;

  - using at least one flag on a first shackle; and

  - using at least one flag on a second shackle.

## **Evidence Appendix**

**RULE 132 THIRD AFFIDAVIT**

Applicant : Allan Todd Berry  
Serial No.: 10/657,977  
Filed: 09/09/2003  
Examiner: David J Parsley  
Group Art Number: 3643

**DECLARATION UNDER 37 C.F.R. 1.132**

I, Allan Todd Berry, declare and state:

That I am a citizen of the United States.

That I am over the age of eighteen (18) and I have personal knowledge concerning my testimony.

I am the inventor of the current invention which is the subject matter of the patent application.

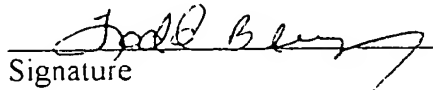
I have been working in the chicken process industry for more than 20 years.

I have reviewed copies of the patents (U.S. Patent No. 4,150,374 to Brook and U.S. Patent No. 4,372,099 to Linville) and patent applications (No. 2003/0139130 to Steffler et al. and No. 2003/0065414 to van den Nieuwelaar) in the most recent Patent Office reply. My invention, as a whole, is not disclosed in any one of these patents or patent applications based on my review of all the patents and patent applications referred to in the response from the Patent Office.

Based on my over 20 years of experience in the chicken process industry and my knowledge in this field, it is my opinion, as one skilled in this industry, that there is not a motivation or suggestion, to one skilled in this area, to combine these patents and patent applications, cited by the Patent Office in its most recent response, to produce my invention.

That the undersigned declares further that all statements made herein are of his own knowledge and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Further declarant saith not.

  
Signature  
Todd Berry  
Print Name

SWORN TO AND SUBSCRIBED before me  
this 6<sup>th</sup> day of Dec., 2005.

NOTARY PUBLIC, GEORGIA, STATE AT LARGE

My Commission Expires:

NOTARY PUBLIC, HALL COUNTY, GEORGIA  
MY COMMISSION EXPIRES NOVEMBER 17, 2008



**RULE 132 AFFIDAVIT**

Applicant : Allan Todd Berry  
Serial No.: 10/657,977  
Filed: 09/09/2003  
Examiner: David J Parsley  
Group Art Number: 3643

**DECLARATION UNDER 37 C.F.R. 1.132**

I, Allan Todd Berry, declare and state:

That I am a citizen of the United States.

That I am over the age of eighteen (18) and I have personal knowledge concerning my testimony.

I am the inventor of the current invention which is the subject matter of the patent application.

The system is described in detail in the patent application but the features, taken together as a whole, are not outlined in any one patent that was part of the response from the Patent Office. The elements of the PLC, the sensors, the data bus communications, the medal flags, and the inspection interface button, together, are not disclosed in any one patent based on my review of all the patents in the response from the Patent Office.

I have been working in the chicken process industry for more than

20 years.

It is my opinion that the invention is a commercial success because we have already sold 18 systems incorporating my invention, and it is currently used in production. Another sign of commercial success is the overwhelming interest I have received through phone calls from poultry companies wanting to know more about the system. I have traveled to numerous companies across the United States to give

presentations and give quotes for the system pricing. I continue to receive telephone calls on a daily basis requesting printed material on the system. In addition, the invention is being considered by USDA officials to use as the basis for writing the new Directive regulations on the process of determining quality of chicken paws.

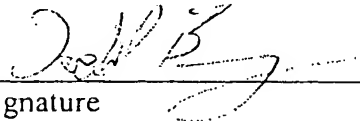
In January of 2002, China began to put restrictions on the quality of the chicken paws they were receiving from the United States. Since then, many poultry processors ceased producing the paws because there was not a viable method for determining the quality of the feet. The invention of the current patent application, in conjunction with the USDA inspectors input, can accurately determine which paws are acceptable and which are not. Therefore, my invention satisfies the need long felt by the poultry industry. It is the only system readily available that meets the criteria of the existing FSIS Directive 6210.2 as it is written.

That the undersigned declares further that all statements made herein are of his own knowledge and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false



statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Further declarant saith not.

  
Signature

Todd Berry  
Print Name

SWORN TO AND SUBSCRIBED before me  
this 4<sup>th</sup> day of January, 2005.

NOTARY PUBLIC, GEORGIA, STATE AT LARGE

My Commission Expires.



NOTARY PUBLIC, HALL COUNTY, GEORGIA  
MY COMMISSION EXPIRES NOVEMBER 17, 2008

**RULE 132 SECOND AFFIDAVIT**

Applicant : Allan Todd Berry  
Serial No.: 10/657,977  
Filed: 09/09/2003  
Examiner: David J Parsley  
Group Art Number: 3643

**DECLARATION UNDER 37 C.F.R. 1.132**

I, Allan Todd Berry, declare and state:

That I am a citizen of the United States.

That I am over the age of eighteen (18) and I have personal knowledge concerning my testimony.

I am the inventor of the current invention which is the subject matter of the patent application.

I have been working in the chicken process industry for more than 20 years.

I have reviewed copies of the patents and patent applications in the most recent Patent Office reply. My invention, as a whole, is not disclosed in any one patent or patent application based on my review of all the patents and patent applications referred to in the response from the Patent Office.

Based on my over 20 years of experience in the chicken process industry and my knowledge in this field, it is my opinion, as one skilled in this industry, that there is not an indication or suggestion, to one skilled in this area, to combine these patents and patent applications, cited by the Patent Office in its most recent response, to produce my invention.

I have attached hereto a summary sheet of the customers using my invention with associated invoice amounts, and a true and correct copy of the invoices submitted to the

customers which are using my invention which is described in my patent application. They are marked as Exhibits 1 and 2, respectively. The invoices are for the purchase of my invention, as such features are claimed and are as described in my patent application, and such invoices are true and correct copies of the invoices sent to the respective customers and are business records which are kept in the ordinary course of business.

My invention, in its unique combination, as described in the patent application and as claimed in my patent application, is a commercial success. It is currently used in production by many customers. Those customers are identified in Exhibits 1 and 2. The invoices total more than \$1.8 million dollars. With over \$1.8 million in sales of my invention, my invention, as the features recited in the claims, is a commercial success.

That the undersigned declares further that all statements made herein are of his own knowledge and that all statements made on information and belief are believed to be true; and, further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under

Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Further declarant saith not.

Allen Todd Berry  
Signature

ALLEN TODD BERRY  
Print Name

SWORN TO AND SUBSCRIBED before me  
this 4 day of July, 2005.

NOTARY PUBLIC, GEORGIA, STATE AT LARGE

My Commission Expires:

Ruby B. Beaulieu

NOTARY PUBLIC, HALL COUNTY, GEORGIA  
MY COMMISSION EXPIRES NOVEMBER 17, 2008

Customer	Invoice	Amount
Pilgrims Pride	2115	63715
Pilgrims Pride	2367	57800
Pilgrims Pride	2383	47800
Pilgrims Pride	2387	95600
Pilgrims Pride	2409	81600
Tyson Foods	2768	145500
Mountaire Farms	2718	142800
AJC International	3645	91200
George's Inc	3730	36000
Wayne Farms	3772	100080
Wayne Farms	3774	87426
Tyson Foods	3798	82800
Tyson Foods	3878	41100
Keystone Foods	3957	94320
Wayne Farms	4033	55950
Allen Family Foods	4075	49875
Equity Group	4076	98400
Equity Group	4100	53280
George's Inc	4103	36000
George's Inc	4170	131040
Tyson Foods	2817	77000
Foster Farms	2315	61995
Pilgrims Pride	2366	96536
TOTAL		1827817

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
5/31/2002	2115

<b>BILL TO</b>
PILGRIMS PRIDE CORPORATION PO BOX 5000 PITTSBURG, TX 75686-5000  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
CONAGRA POULTRY CO OF CANTON  654 UNTVETER RD. CANTON GA. 30114

P.O. #	TERMS	REP	DUE DATE	PROJECT	
NON 53471	Net 15	ATB	6/15/2002		
DESCRIPTION			QTY	RATE	AMOUNT
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS PER BID # 448 INCLUDES ALL LABOR AND MATERIALS FOR BRACKETS, SENSORS, PUSH BUTTON STATIONS, PANELS, INSTALLATION AND TRAINING Sales Tax			1	63,715.00	63,715.00
				6.00%	0.00
Your business is appreciated!				<b>Total</b>	\$63,715.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
11/26/2002	2367

BILL TO
PILGRIMS PRIDE CORPORATION PO BOX 5000 PITTSBURG, TX 75686-5000  ATTN: ACCTS PAYABLE

*Clinton, AR*

PURCHASE ORDER NO.	DUE DATE	REP	TERMS	PROJECT	
P320003659	11/26/2002	ATB	Due on receipt	Paw Recovery System	
DESCRIPTION			QTY	RATE	AMOUNT
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS PER BID # 436-F			1	57,800.00	57,800.00
Sales Tax				7.00%	0.00
Your business is appreciated!				<b>Total</b>	\$57,800.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGLA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
12/9/2002	2383

<b>BILL TO</b>
PILGRIM'S PRIDE CORPORATION PO BOX 5000 PITTSBURG, TX 75686-0093  ATTN: ACCTS PAYABLE

Chat, TN

PURCHASE ORDER NO.	DUE DATE	REP	TERMS	PROJECT	
CCP 688	12/9/2002	ATB	Due on receipt		
DESCRIPTION			QTY	RATE	AMOUNT
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS PER TERMS OF BID # 436-F			1	47,800.00	47,800.00
Sales Tax				7.00%	0.00
HAPPY HOLIDAYS!				<b>Total</b>	\$47,800.00



**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
12/10/2002	2387

<b>BILL TO</b>
PILGRIM'S PRIDE CORPORATION PO BOX 5000 PITTSBURG, TX 75686-0093  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
CONAGRA 898 BARBER ST. ATHENS, GA. 30610

P.O. #	TERMS	REP	DUE DATE	PROJECT	
CER 1193	Due on receipt	ATB	12/10/2002		
DESCRIPTION			QTY	RATE	AMOUNT
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS PER BID # 436-F			1	95,600.00	95,600.00
Sales Tax				7.00%	0.00
HAPPY HOLIDAYS!				<b>Total</b>	\$95,600.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527

Main # 770-983-3929

Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
1/6/2003	2409

<b>BILL TO</b>
PILGRIMS PRIDE PO BOX 5000 PITTSBURG, TX 75686  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
CONAGRA POULTRY -PLANT MRO STOCKER GAINESVLE PROC-ATTN MECH STKRM 949 INDUSTRIAL BLVD GAINESVILLE, GA. 30501

P.O. #	TERMS	REP	DUE DATE	PROJECT		
PG32228220	Due on receipt	SEM	1/6/2003			
DESCRIPTION			QTY	RATE	AMOUNT	
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS PER TERMS OF BID # 436-F			1	81,600.00	81,600.00	
Sales Tax				7.00%	0.00	
HAPPY NEW YEAR!				<b>Total</b>	\$81,600.00	

# Invoice

## BERRY PLUMBING & EQUIPMENT

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

DATE	INVOICE #
8/14/2003	2768

<b>BILL TO</b>
TYSON FOODS, INC. PO BOX 2020 SPRINGDALE, AR 72765-2020  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
TYSON FOODS, INC. 19571 WHITFIELD ROAD SEDALIA, MO. 65301  ATTN: MIKE GINGLER

P.O. #	TERMS	REP	DUE DATE	PROJECT		
4502092220	Due on receipt	ATB	8/14/2003			
DESCRIPTION			QTY	RATE	AMOUNT	
PER TERMS OF BID # 700-B						
BERRY PAW RECOVERY SYSTEM			1	120,000.00	120,000.00	
B-PH-LH/RH PAW HARVESTER			2	8,500.00	17,000.00	
HYDRAULIC POWER UNIT - \$8,500 EACH			1	8,500.00	8,500.00	
Sales Tax				7.00%	0.00	
Thank you for your business.				<b>Total</b>	\$145,500.00	

# Invoice

## BERRY PLUMBING & EQUIPMENT

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

DATE	INVOICE #
8/4/2003	2718

<b>BILL TO</b>
MOUNTAIRE FARMS PO BOX 710 SELBYVILLE, DE 19975  ATTN: ACCTS PAYABLE

PURCHASE ORDER NO.	DUE DATE	REP	TERMS	PROJECT	
S 3990	8/4/2003	ATB	Due on receipt		
DESCRIPTION			QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% DOWN FOR BID #708			2	60,000.00	120,000.00
PAW RECOVERY SYSTEM - 2:1 MAIN PANELS			2	8,000.00	16,000.00
B-PH-LH/RH PAW HARVESTER			1	6,800.00	6,800.00
SMALL REPORTING PROGRAM				7.00%	0.00
Sales Tax					
Thank you for your business.				<b>Total</b>	\$142,800.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
11/11/2004	3645

<b>BILL TO</b>
AJC INTERNATIONAL, Inc. 5188 Roswell Road Atlanta, GA 30342

<b>SHIP TO</b>
PETERSON FARMS, INC. 2ND & ROLLER STREET DECATUR, AR 72722

P.O. #	TERMS	REP	DUE DATE	PROJECT	
57035	Due on receipt	ATB	11/11/2004	PETERSON FARMS	
DESCRIPTION			QTY	RATE	AMOUNT
TERMS OF BID #955					
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS 2 to 1 SYSTEM QTY. 2 @ \$55,000			0.6	110,000.00	66,000.00
B-PH-LH/RH PAW HARVESTER QTY. 2 @ \$7,500			0.6	15,000.00	9,000.00
PAW PICKERS QTY. 2 @ \$9,000			0.6	18,000.00	10,800.00
HYDRAULIC POWER UNIT-3 STATION QTY. 1 @ \$9,000			0.6	9,000.00	5,400.00
Sales Tax				7.00%	0.00
Your business is appreciated!				<b>Total</b>	\$91,200.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
1/3/2005	3730

<b>BILL TO</b>
GEORGE'S, INC. PO DRAWER G SPRINGDALE, AR 72765-2030

<b>SHIP TO</b>
GEORGE'S, INC. 1306 N. KANSAS SPRINGDALE, AR 72764

P.O. #	TERMS	REP	DUE DATE	PROJECT	
99790	Due on receipt	ATB	1/3/2005	Paw Recovery	
DESCRIPTION			QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% PER TERMS OF BID #974-B			0.6	60,000.00	36,000.00
PAW RECOVERY SYSTEM - 1:1 MAIN PANEL INCLUDES: QTY. OF 1 BERRY PAW HARVESTER AND QTY. OF 1 BERRY PAW RECOVERY SYSTEM @ \$60,000					
*Customer is supplying their own Hydraulic Power Unit for Paw Harvesters Afterwards, they came back and ordered a 2-station, then went back to upgrade to 3 station. Sales Tax				7.00%	0.00
Corrected Copy			Total		\$36,000.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
1/24/2005	3772

BILL TO
WAYNE FARMS PO BOX 383 DOBSON, NC 27017

SHIP TO
WAYNE FARMS 802 EAST ATKINS STREET DOBSON, NC 27017

P.O. #	TERMS	REP	DUE DATE	PROJECT	
40588	Due on receipt	ATB	1/24/2005		
DESCRIPTION			QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% DOWN PAYMENT PER TERMS OF BID #917-E.					
BERRY PAW RECOVERY SYSTEM - 1:1 MAIN PANEL			0.6	60,000.00	36,000.00
BPH-LH/RH PAW HARVESTER			0.6	9,000.00	5,400.00
HYDRAULIC POWER UNIT-2 STATION INCLUDES LABOR & MATERIALS FOR ALL PLUMBING			0.6	25,000.00	15,000.00
TRACK WORK: LABOR & MATERIALS FOR 400' OF PICKING LINE AND ONE ADDITIONAL DRIVE			0.6	56,150.00	33,690.00
ALL NECESSARY DRIP PANS FOR PRS PROJECT			0.6	10,800.00	6,480.00
BACK-UP UNLOADER			0.6	3,800.00	2,280.00
DELIVERY OF EQUIPMENT			0.6	800.00	480.00
SURCHARGE FOR INCREASED INSURANCE LIABILITY COVERAGE (FROM \$2 MILLION TO \$3 MILLION)			1	750.00	750.00
Sales Tax				7.00%	0.00
Corrected Copy				<b>Total</b>	<b>\$100,080.00</b>

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
1/24/2005	3774

BILL TO
WAYNE FARMS PO BOX 69 PENDERGRASS, GA. 30567  ATTN: ACCTS PAYABLE

SHIP TO
WAYNE FARMS PO BOX 69 PENDERGRASS, GA. 30567  ATTN: ACCTS PAYABLE

P.O. #	TERMS	REP	DUE DATE	PROJECT	
22684	Due on receipt	ATB	1/24/2005		
DESCRIPTION			QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% DOWN PER TERMS OF BID #944-B					
PAW RECOVERY SYSTEM - 1:1 MAIN PANEL			0.6	60,000.00	36,000.00
B-PH-LH/RH PAW HARVESTER WITH REJECT CHUTE & AIR CONTROL VALVES			0.6	9,000.00	5,400.00
LABOR & MATERIALS FOR INSTALLATION OF 290' OF TRACK, SHACKLES, CHAIN, AND DROP-RODS			0.6	43,500.00	26,100.00
ELECTRICAL: LABOR & MATERIALS FOR 110 VOLTS TO MAIN PANEL, SUPPLY 24 VOLTS TO PAW HARVESTER, DEVICENET CABLE TO ALL SENSORS			0.6	19,000.00	11,400.00
LABOR & MATERIALS TO RELOCATE EXISTING PAW PICKER AND INSTALL BERRY PAW HARVESTER. INCLUDES RELOCATING WATER LINES, HYDRAULIC LINES AND STEAM / HOT WATER LINES.			0.6	12,960.00	7,776.00
SURCHARGE FOR INCREASED INSURANCE LIABILITY COVERAGE (FROM \$2 MILLION TO \$3 MILLION)			1	750.00	750.00
Sales Tax				7.00%	0.00
Thank you for your business.				<b>Total</b>	<b>\$87,426.00</b>



**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
2/10/2005	3798

BILL TO
TYSON FOODS PO BOX 2020 SPRINGDALE, AR 72765-2020 MAIL CODE: AR07693

SHIP TO
NASHVILLE PROCESSING PLANT TYSON FOODS, INC. AR06721 100 E CASSADY STREET NASHVILLE, AR 71852-3392

P.O. #	TERMS	REP	DUE DATE	PROJECT	
4503110203	Due on receipt		2/10/2005		
DESCRIPTION			QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% DOWN PER TERMS OF BID # 874					
PAW RECOVERY SYSTEM - 1:1 MAIN PANEL(S) QTY. OF 2 @ \$60,000 EACH MEYN REHANGERS			0.6	120,000.00	72,000.00
B-PH-LH/RH PAW HARVESTER QTY. OF 2 @ \$9,000 EACH ONE LEFT / ONE RIGHT			0.6	18,000.00	10,800.00
Sales Tax				7.00%	0.00
Your business is appreciated!				<b>Total</b>	<b>\$82,800.00</b>

# Invoice

## BERRY PLUMBING & EQUIPMENT

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

DATE	INVOICE #
3/24/2005	3878

BILL TO
TYSON FOODS PO BOX 2020 SPRINGDALE, AR 72765 MAIL CODE: AR07693

SHIP TO
UNION CITY PROCESSING PLANT TYSON FOODS, INC 2800 EAST TYSON DR UNION CITY, TN 38261

P.O. #	TERMS	REP	DUE DATE	PROJECT		
4503197103	Due on receipt	ATB	3/24/2005			
DESCRIPTION			QTY	RATE	AMOUNT	
PROGRESS PAYMENT OF 60% DOWN PER TERMS OF BID #956						
PAW RECOVERY SYSTEM - 1:1 MAIN PANEL WITH STORK			0.6	60,000.00	36,000.00	
REHANGERS			0.6	8,500.00	5,100.00	
B-PH-LH/RH PAW HARVESTER				7.00%	0.00	
Sales Tax						
Your business is appreciated!				<b>Total</b>	\$41,100.00	

**BERRY PLUMBING & EQUIPMENT**5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527

Main # 770-983-3929

Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
4/20/2005	3957

<b>BILL TO</b>
KEYSTONE FOODS PO BOX 416 ALBANY, KY 42602

<b>SHIP TO</b>
KEYSTONE FOODS RT. 4, BOX 439 ALBANY, KY 42602

P.O. #	TERMS	REP	DUE DATE	PROJECT		
40009	Due on receipt		4/20/2005			
DESCRIPTION			QTY	RATE	AMOUNT	
PAW RECOVERY SYSTEM - MODEL BPRS2			0.6	130,000.00	78,000.00	
QTY. 2 SYSTEMS @ \$65,000 EACH			0.6	17,000.00	10,200.00	
B-PH-LH/RH PAW HARVESTER WITH REJECT CHUTE & AIR CONTROLS						
MODEL BPH-LH/RH						
QTY. 2 @ \$8,500 EACH			0.6	10,200.00	6,120.00	
HYDRAULIC POWER UNIT - 3 STATION						
MODEL BHPU-3						
QTY. 1 @ \$10,200 EACH				7.00%	0.00	
Sales Tax						
Thank you for your business.				<b>Total</b>	\$94,320.00	

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
5/16/2005	4033

<b>BILL TO</b>
WAYNE FARMS, LLC PO BOX 470 UNION SPRINGS, AL 36089  ATTN: BRENDA BROOKS / ACCTS PAYABLE

<b>SHIP TO</b>
WAYNE FARMS, LLC 444 BASKIN STREET SOUTH UNION SPRINGS, AL 36089

P.O. #	TERMS	REP	DUE DATE	PROJECT		
46618	Due on receipt		5/16/2005			
DESCRIPTION				QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% DOWN PER TERMS OF BID # 1011				0.6	65,000.00	39,000.00
BERRY PAW RECOVERY SYSTEM - 1:1 MAIN PANEL						
STORK REHANGERS WITH 348 CHAIN				0.6	9,500.00	5,700.00
BPH-LEFTHAND PAW HARVESTER WITH REJECT CHUTE & AIR						
CONTROL VALVES				1	0.00	0.00
BERRY PAW UNTANGLER (NO CHARGE: VALUE \$1,100)				0.6	3,450.00	2,070.00
BERRY FOOTPAD SCRUBBER - 24"				0.6	8,500.00	5,100.00
HYDRAULIC POWER UNIT - 2 STATION				0.6	6,800.00	4,080.00
BERRY REPORTING PROGRAM					7.00%	0.00
Sales Tax						
Thank you for your business					<b>Total</b>	\$55,950.00

**BERRY PLUMBING & EQUIPMENT**5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527

Main # 770-983-3929

Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
5/31/2005	4075

<b>BILL TO</b>
ALLEN FAMILY FOODS 126 N. SHIPLEY STREET SEAFORD, DE 19973  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
ALLEN FAMILY FOODS ROUTE 5 HARBESON, DE 19951

P.O. #	TERMS	REP	DUE DATE	PROJECT		
H 037800	Due on receipt	ATB	5/31/2005			
DESCRIPTION				QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% DOWN PER TERMS OF BID # 998-C				0.6	65,000.00	39,000.00
PAW RECOVERY SYSTEM - 1:2				0.6	8,500.00	5,100.00
B-PH-LH/RH PAW HARVESTER WITH REJECT CHUTE & AIR						
CONTROL VALVES				0.6	8,000.00	4,800.00
HYDRAULIC POWER UNIT - 2 STATION				0.6	1,625.00	975.00
ESTIMATED SHIPPING					7.00%	0.00
Sales Tax						
Thank you for your business.					<b>Total</b>	\$49,875.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
5/31/2005	4076

BILL TO
EQUITY GROUP- GA DIVISION, LLC FRESH MAIN PROCESSING PO BOX 588 CAMILLA, GA 31730 ATTN: ACCTS PAYABLE

SHIP TO
EQUITY GROUP- GA DIVISION, LLC 7220 HWY US 19 NORTH FRESH MAIN PROCESSING CAMILLA, GA 31730

P.O. #	TERMS	REP	DUE DATE	PROJECT		
11333	Due on receipt	ATB	5/31/2005			
DESCRIPTION				QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% DOWN PER TERMS OF BID # 979						
PAW RECOVERY SYSTEM - MEYN 1:1 SYSTEM				0.6	130,000.00	78,000.00
QTY. 2 @ \$65,000 EACH				0.6	17,000.00	10,200.00
B-PH-LH/RH PAW HARVESTER WITH REJECT CHUTE AND AIR CONTROL						
QTY. 2 @ \$8,500 EACH				0.6	6,800.00	4,080.00
REPORTING PROGRAM						
QTY. 1 @ \$6,800 EACH				0.6	10,200.00	6,120.00
HYDRAULIC POWER UNIT - 3 STATION						
QTY. 1 @ \$10,200 EACH					7.00%	0.00
Sales Tax						
Your business is appreciated!					<b>Total</b>	\$98,400.00

# Invoice

**BERRY PLUMBING & EQUIPMENT**  
5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

DATE	INVOICE #
6/9/2005	4100

BILL TO
EQUITY GROUP-EUFAULA DIVISION, LLC 57 MELVIN CLARK ROAD BAKER HILL, AL 36027  ATTN: ACCTS PAYABLE

SHIP TO
EQUITY GROUP-EUFAULA DIVISION, LLC 57 MELVIN CLARK ROAD BAKER HILL, AL 36027  ATTN: ACCTS PAYABLE

P.O. #	TERMS	REP	DUE DATE	PROJECT		
102218	Due on receipt		6/9/2005			
DESCRIPTION				QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% PER TERMS OF BID #978				0.6	65,000.00	39,000.00
PAW RECOVERY SYSTEM - 1:2 MAIN PANEL				0.6	8,500.00	5,100.00
B-PH-LH/RH PAW HARVESTER WITH REJECT CHUTE AND AIR						
CONTROL VALVES				0.6	6,800.00	4,080.00
REPORTING PROGRAM				0.6	8,500.00	5,100.00
HYDRAULIC POWER UNIT - 2 STATION					7.00%	0.00
Sales Tax						
Your business is appreciated!					<b>Total</b>	\$53,280.00

# Invoice

**BERRY PLUMBING & EQUIPMENT**  
5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

DATE	INVOICE #
6/9/2005	4103

<b>BILL TO</b>
GEORGE'S, INC. PO DRAWER G SPRINGDALE, AR 72765-2030

<b>SHIP TO</b>
GEORGE'S, INC. 1306 N. KANSAS SPRINGDALE, AR 72764

P.O. #	TERMS	REP	DUE DATE	PROJECT	
102218	Due on receipt	ATB	6/9/2005		
DESCRIPTION			QTY	RATE	AMOUNT
PROGRESS PAYMENT OF 60% PER TERMS OF BID # 974-B PURCHASE OF 2ND SYSTEM			0.6	60,000.00	36,000.00
PAW RECOVERY SYSTEM - 1:1 MAIN PANEL INCLUDES: QTY. OF 1 - BERRY PAW HARVESTER QTY. OF 1 - BERRY PAW RECOVERY SYSTEM ON MEYN REHANGERS Sales Tax				7.00%	0.00
Thank you for your business.				<b>Total</b>	\$36,000.00



**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
6/30/2005	4170

<b>BILL TO</b>
GEORGE'S, INC PO DRAWER G SPRINGDALE, AR 72765  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
GEORGE'S, INC ROUTE 1, BOX 1454 CASSVILLE, MO 65625

P.O. #	TERMS	REP	DUE DATE	PROJECT		
99246022	Due on receipt	ATB	6/30/2005			
DESCRIPTION			QTY	RATE	AMOUNT	
PROGRESS PAYMENT OF 60% DOWN PER TERMS OF BID 983 / DATED 01-03-05						
PAW RECOVERY SYSTEM			0.6	180,000.00	108,000.00	
1:1 MAIN PANELS						
QTY 3 @ \$60,000 EACH			3	9,000.00	27,000.00	
B-PH-LH/RH PAW HARVESTER WITH REJECT CHUTE & AIR CONTROL VALVES						
QTY 3 @ \$9,000 EACH			0.6	12,000.00	7,200.00	
HYDRAULIC POWER UNIT - 4 STATION						
QTY 1 @ \$12,000 EACH			0.6	26,400.00	15,840.00	
PAW PICKER						
QTY 3 @ \$8,800 EACH				-27,000.00	-27,000.00	
MULTI-PURCHASE SPECIAL PRICING PER TODD BERRY				7.00%	0.00	
Sales Tax						
Thank you for your business.				<b>Total</b>	\$131,040.00	

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
9/23/2003	2817

<b>BILL TO</b>
TYSON FOODS PO BOX 2020 SPRINGDALE, AR 72765-2020  MAIL CODE: AR07693

<b>SHIP TO</b>
GRANNIS PROCESSING PLAN TYSON FOODS, INC. AR06021 HWY. 71 N GRANNIS, AR 71944

P.O. #	TERMS	REP	DUE DATE	PROJECT	
4502162672	Due on receipt	ATB	9/23/2003	GRANNIS, AR	
DESCRIPTION			QTY	RATE	AMOUNT
PER TERMS OF BID #709					
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS			1	60,000.00	60,000.00
2:1 MAIN PANEL			1	8,500.00	8,500.00
BERRY PAW HARVESTER			1	8,500.00	8,500.00
BERRY 2 STATION HYDRAULIC POWER PAC				7.00%	0.00
Sales Tax					
Thank you for your business.				<b>Total</b>	\$77,000.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

DATE	INVOICE #
10/10/2002	2315

<b>BILL TO</b>
FOSTER FARMS PO BOX 457 LIVINGSTON, CA 95334  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
KELSO CHICKEN PROCESSING FOSTER FARMS 1700 SOUTH 13TH AVE KELSO, WA 98626

P.O. #	TERMS	REP	DUE DATE	PROJECT	
4500267839	Due on receipt	ATB	10/10/2002	Paw Recovery System	
DESCRIPTION			QTY	RATE	AMOUNT
PER BID # 516					
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS			1	44,298.00	44,298.00
1:1 MAIN PANEL			1	1,080.00	1,080.00
REJECT CHUTE			1	537.00	537.00
AIR VALVE CONTROL BOX			4	2,400.00	9,600.00
PUSH BUTTON INSPECTOR STATIONS			1	1,080.00	1,080.00
MODIFY EXISTING PAW HARVESTER					
PAYMENT OF 60% - ESTIMATED TRAVEL EXPENSES OF \$9,000.00			1	5,400.00	5,400.00
Sales Tax				7.00%	0.00
Your business is appreciated!				<b>Total</b>	\$61,995.00

**BERRY PLUMBING & EQUIPMENT**

5634 OSCAR GILSTRAP RD.  
CLERMONT, GEORGIA 30527  
Main # 770-983-3929  
Fax # 770-983-3911

**Invoice**

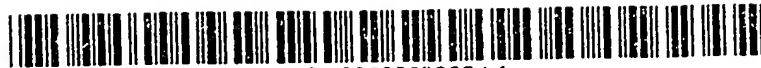
DATE	INVOICE #
11/22/2002	2366

<b>BILL TO</b>
PILGRIM'S PRIDE CORPORATION PO BOX 5000 PITTSBURG, TX 75686-0093  ATTN: ACCTS PAYABLE

<b>SHIP TO</b>
CONAGRA POULTRY 1810 SOUTHWEST AVE. EL DORADO, AR 71730  ATTN: ELD-PLT MAINTENANCE WHSE

P.O. #	TERMS	REP	DUE DATE	PROJECT	
PE32338015	Due on receipt	ATB	11/22/2002		
DESCRIPTION			QTY	RATE	AMOUNT
PAW RECOVERY SYSTEM - PANEL(S) AND PUSH BUTTONS			1	81,600.00	81,600.00
ESTIMATED TRAVEL EXPENSES			1	14,936.40	14,936.40
Sales Tax				7.00%	0.00
				<b>Total</b>	\$96,536.40

**Copy of Patent Application**



US 20050059332A1

(19) United States

(12) Patent Application Publication  
Berry

(10) Pub. No.: US 2005/0059332 A1

(43) Pub. Date: Mar. 17, 2005

(54) PROCESS TO ELECTRONICALLY  
AUTOMATE THE SORTING OF CHICKEN  
FEET IN THE CATEGORY OF EDIBLE OR  
INEDIBLE

(52) U.S. Cl. .... 452/150

(57) ABSTRACT

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Smyrna, GA 30082 (US)

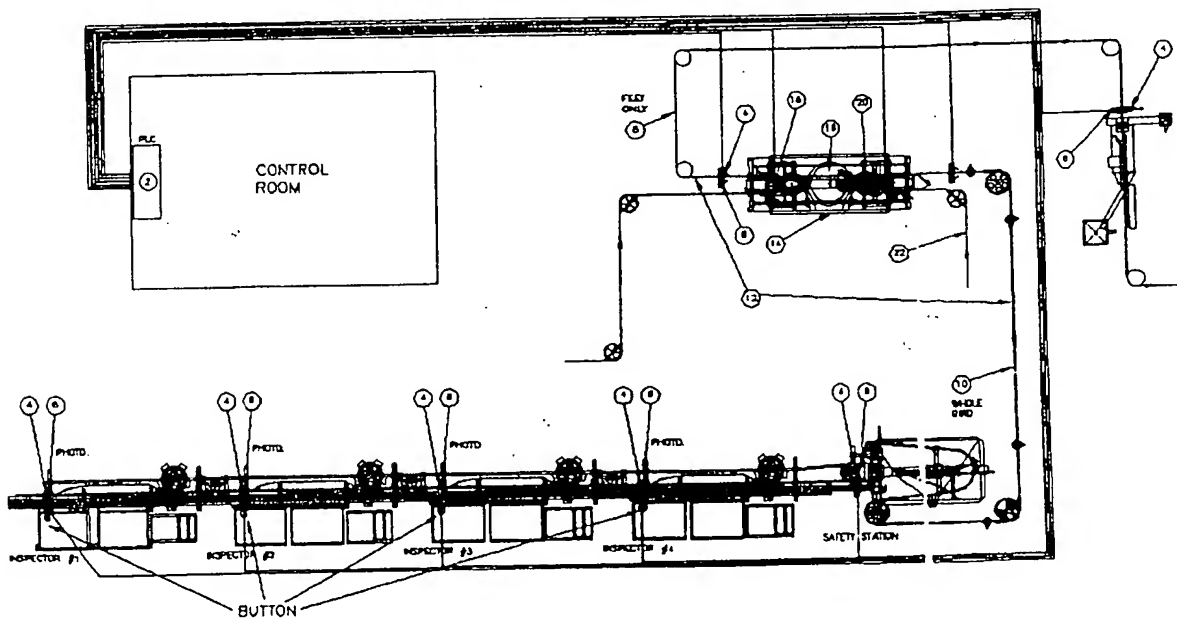
(21) Appl. No.: 10/657,977

(22) Filed: Sep. 9, 2003

## Publication Classification

(51) Int. Cl.<sup>7</sup> ..... A22C 18/00; A22C 21/00

The invention of this patent is a process to electronically automate the sorting of chicken feet in the category of edible or inedible. The invention employs electronic sensors and a programmable logic card to maintain the identity between all processed chickens and their respective feet. When the processed chickens are inspected by the USDA or plant quality inspectors, a determination is made as to whether the respective feet from the chicken are edible or inedible. If the feet are inedible, the inspector presses a button that interfaces with the subject invention and the status of the feet are electronically set to inedible. The system matches the inedible feet to the processed chicken. In this way, the feet and associated processed chicken are electronically maintained by means of the subject invention.



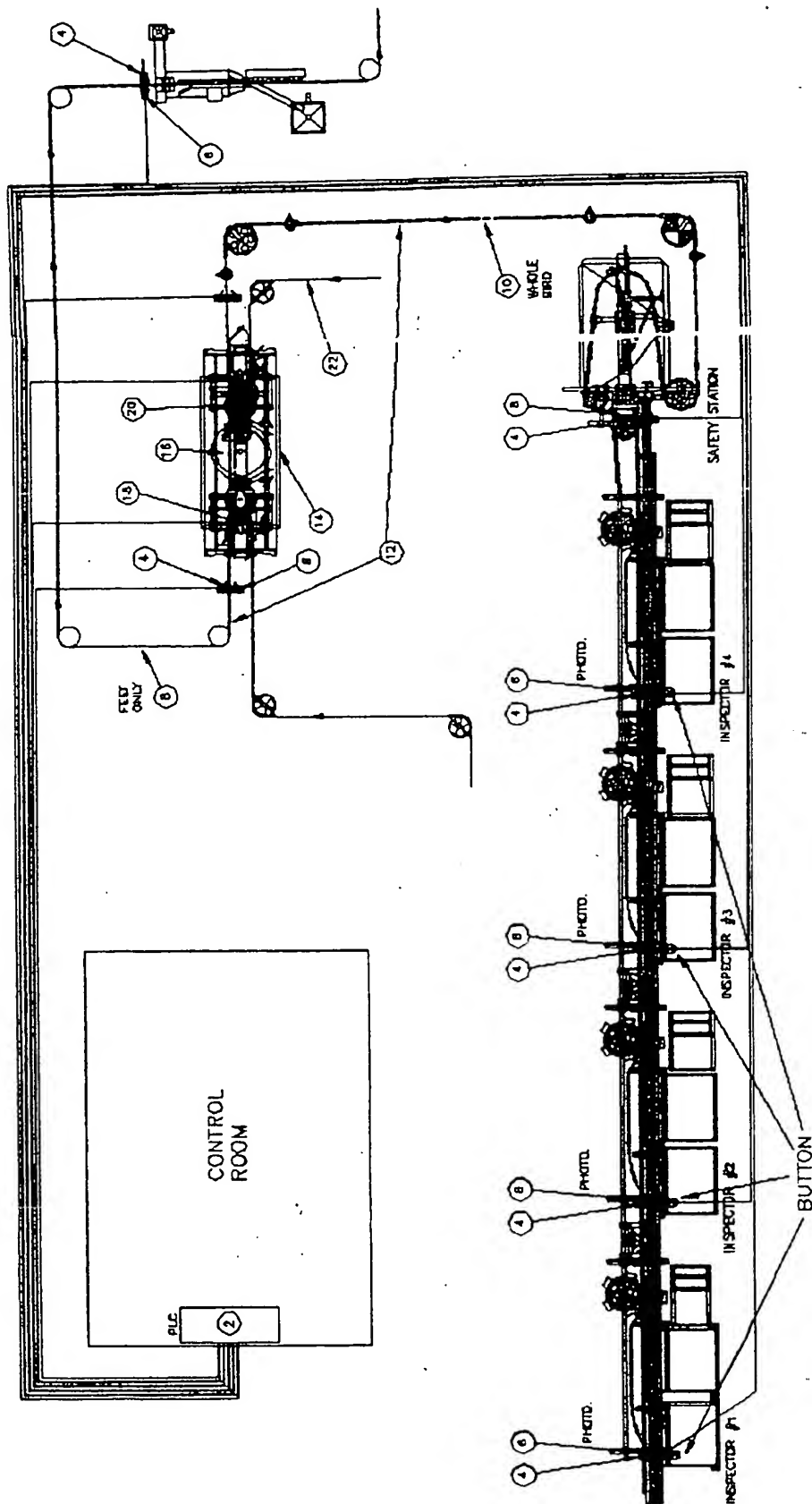


FIG. 1

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# PROCESS TO ELECTRONICALLY AUTOMATE THE SORTING OF CHICKEN FEET IN THE CATEGORY OF EDIBLE OR INEDIBLE

## BACKGROUND OF THE INVENTION

### [0001] 1) Field of the Invention

[0002] The field of invention relates to a process to electronically sort chicken feet into the category of either edible or inedible. More particularly, the invention utilizes electronic tracking sensors to maintain identity between all processed chickens and their respective feet.

### [0003] 2) Description of Prior Art

[0004] While the prior art includes methods and apparatus for performing various poultry processing operations, insofar as the applicants are aware there is no known method that utilizes an electronic tracking system to maintain identity between all processed chickens and their respective feet.

[0005] The demand for poultry, and especially chicken feet as a specialty food item, particularly in the Orient, is relatively great. Approximately three hundred tons per month are currently being exported from the United States. However, the supply of poultry feet is limited and the cost is kept relatively high because of the lack of a fully automatic method and apparatus for processing such poultry parts into edible and inedible parts. Conventional practice calls for the poultry feet be sorted into edible and inedible when an inspector, from the USDA or plant quality facility, determines that the chicken is edible or inedible. However, the labor required to manually remove the feet from the conveyor lines subsequent to the inspector's review of the chicken makes the cost of poultry process of the manual method unattractive.

[0006] Therefore, it has long been known that it would be desirable to have a method to electronically sort the feet into the category of edible and inedible when the chicken is inspected and determined to be either edible or inedible. The invention thus provides for the processing of poultry in an automatic, dependable and economical fashion so as to permit the sale of such chicken parts at a commercially acceptable price and which has particular utility in the processing of poultry feet.

## SUMMARY OF THE INVENTION

[0007] Poultry processing facilities utilize motor driven chains to convey whole chickens, (also referred to as whole birds) and chicken feet throughout the facility. Primarily, there are two main types of these chain lines in a facility. The first is the picking line whereby live chickens are hung by their feet, killed, and preprocessed. This is where live chickens are inserted into the process by being hung by their feet in a shackle. There is only one chicken per shackle. After the chickens are preprocessed, the chicken feet are cut and the chickens are separated from their respective feet. The whole birds are then automatically transferred from the picking line to the second type of line commonly called the eviscerating line. This automatic transfer is accomplished using a machine called an automatic rehanger. An automatic rehanger is a machine with "floating" trolleys (or carriers). As the picking line moves, a trolley is picked up and moved at picking line speed. When the chicken feet are cut, the chicken is no longer attached to the picking line. The

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chicken is then supported by a trolley. The feet from the chicken remain on the shackle on the picking line and are then transported towards the paw or chicken foot harvester for automatic unloading from the picking line for edible or inedible sorting. The trolley on the automatic rehanger is moved towards the eviscerating line. As the eviscerating line moves, a trolley is picked up and moved at eviscerating line speed. As the eviscerating line moves, a trolley is aligned with a shackle on the eviscerating line. The automatic rehanger has an arm that contacts the whole bird, thus forcing it into a shackle on the eviscerating line. Each whole bird is carried through the eviscerating process on the eviscerating line. After the whole birds are opened on the eviscerating line, the birds are then presented to USDA or plant quality inspectors while still suspended from the eviscerating line. The inspector makes a determination as to the edible or inedible status of the whole bird and thusly the respective feet.

[0008] With the foregoing background, the applicants' invention comprises an industrial programmable logic controller (PLC) receiving input data from photoelectric and inductive sensors located at various locations on the picking and eviscerating lines. The PLC has been programmed with an electronic model of the process. The photoelectric sensors monitor line movement and verify presence of chickens in shackles. The inductive sensors monitor trolley movement on the automatic rehanger. These sensors send signals back to the PLC via data bus communications. The PLC interprets the sensor data and updates the internal electronic model. Each sensor has diagnostics built-in them and will alert the PLC of a malfunction. If the system detects a malfunction, it will automatically fail to a safe position, thus rejecting all feet as inedible. Each chicken or whole bird and associated chicken feet are assigned a memory location in the PLC, which will follow the chicken and associated chicken feet throughout the process. The process uses the sensors to verify the tracking calibration is correct.

[0009] A primary feature of the invention is that it maintains synchronization between the shackle location of the chicken feet and the shackle location of the whole bird. The system verifies the synchronization at various points throughout the process.

[0010] Photoelectric sensors placed on the picking line detect the presence of whole chickens on the shackles. If a chicken is detected on a shackle, a unique electronic identification tag (ID) is assigned to the chicken's shackle location. As the picking line moves, the photoelectric sensors detect shackles passing in front of its location and the electronic model in the PLC is updated as to the new position. As a given chicken arrives at the entrance to the automatic rehanger, it is separated from its feet and picked up by a trolley on the rehanger. When the trolley picks up the chicken, an inductive sensor verifies that a trolley was present at the transition point and transfers the chicken ID to the automatic rehanger model. As the trolley is moved through the automatic rehanger, its position is tracked continuously. When the trolley reaches the point at which the chickens are transferred to the eviscerating line, a second inductive sensor detects the trolley. At this point, the chicken ID is transferred from the automatic rehanger model to the eviscerating line model. The automatic rehanger model uses metal flags mounted on each trolley, except for one, to count the trolleys passing above the inductive proximity sensors.



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The one trolley that does not have the flag is used to maintain synchronization between the actual positions of the trolleys and the trolley positions in the automatic rehanger electronic model. As the eviscerating line moves, the photoelectric sensors detect shackles passing in front of its location and the electronic model in the PLC is updated as to the new position. Directly after the chicken is transferred to the eviscerating line, a set of photoelectric sensors is positioned to detect the presence of the whole birds. The photoelectric sensors compares which chickens successfully were transferred to the eviscerating line verses the electronic model in the PLC.

[0011] The system also monitors the presence of the chickens directly before the inspector station locations. Another set of photoelectric sensors compares which chickens are detected at this point to the electronic model in the PLC. When the whole birds pass the inspectors, a determination is made as to whether the feet from that chicken are edible or inedible. If the chicken feet are edible, no action is taken by the inspector. If no action is taken by the operator and the chicken feet from the bird in front of the inspector are not "Unknown", the chicken feet will be sorted to the edible bin. If the chicken feet are determined to be inedible, the inspector will press a button located at the inspector's station. This button interfaces with the system and then the system identifies the ID of the whole bird and locates its associated chicken feet on the picking line. The status of the chicken feet will be electronically set to "Inedible".

[0012] The key to the invention being able to constantly identify the whole bird and the chicken feet relies on the number of line shackles between tracking points so that the electronic model will exactly match the actual process.

[0013] The system of the subject invention automatically verifies the number of line shackles each time the chains make a revolution through the process. There are large metal flags attached to one shackle on each picking line and eviscerating line. As this flag passes different points monitored by the system, the electronic model is verified against the actual line data measured by the photoelectric sensors and is changed if some line stretch has occurred.

[0014] The invention resides not in any one of these features per se, but rather in the particular combination of all of them herein disclosed and claimed, and it is distinguished from the prior art in this particular combination of all its structures for the functions specified.

[0015] There has thus been outlined, rather broadly, the important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto. Those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

[0016] Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public

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generally, and especially the scientists, engineers and practitioners in the art who are familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

[0017] It is therefore an object of the present invention to provide a new and improved process to electronically automate the sorting of chicken feet in the category of edible or inedible.

[0018] Another object of the present invention is to provide such a method and apparatus which permits the processing of poultry parts and particularly poultry feet at a reasonable cost.

[0019] Another object is to provide such a method and apparatus that can easily be integrated into existing poultry processing lines to operate cooperatively therewith.

[0020] Another object is to provide such a method and apparatus that operate rapidly, automatically identify edible and inedible chicken feet.

[0021] Another object is to provide such a method and apparatus that are well suited for use with existing methods of sanitation and waste disposal in commercial poultry processing plants.

[0022] Further objects and advantages are to provide improved elements and arrangements thereof in an apparatus for the purposes described which are dependable, economical, durable and fully effective in accomplishing its intended purposes.

[0023] These together with other objects of the invention, along with the various features of novelty that characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its use, reference should be had to accompanying drawing and descriptive matter that is illustrated the preferred embodiment of the invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0024] The invention will be better understood based on the following detailed description. Such description makes reference to the annexed drawing wherein:

[0025] FIG. 1 shows a diagrammatic view of the invention.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

[0026] With reference now to the drawing, and in particular FIG. 1, the applicants' invention comprises an industrial programmable logic controller (PLC) 2 receiving input data from photoelectric sensors 4 and inductive sensors 6 located at various locations on the picking lines 8 and eviscerating lines 10. The PLC 2 has been programmed with an electronic model of the process. The photoelectric sensors 4 monitor line movement and verify presence of chickens in shackles. The inductive sensors 6 monitor trolley movement on the automatic rehanger. These photoelectric sensors 4 and

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inductive sensors 6, send signals back to the PLC 2 via data bus communications. The PLC 2 interprets the sensor data and updates the internal electronic model. Each sensor has diagnostics built-in them and will alert the PLC 2 of a malfunction. If the system detects a malfunction, it will automatically fail to a safe position, thus rejecting all feet as inedible.

[0027] A primary feature of the invention is that it maintains synchronization between the shackle 12 location of the chicken feet and the shackle 12 location of the whole bird. If a whole bird is removed from its shackle 12 location, then the synchronization between the chicken feet and the whole bird will be lost. The system verifies the synchronization at various points throughout the process. If the synchronization is lost, the electronic status of the chicken feet will be set to "Unknown". "Unknown" feet are rejected into the inedible bin when they pass through the paw or chicken feet harvester because a positive determination cannot be made as to the edible or inedible status of such feet.

[0028] Photoelectric sensors 4 placed on the picking line 8 detect the presence of whole chickens on the shackles 12. If a chicken is detected on a shackle 12, a unique electronic identification tag (ID) is assigned to the chicken's shackle 12 location. If a shackle 12 does not contain a chicken, the shackle 12 location is assigned as an empty shackle and tracked throughout the process. As the picking line 8 moves, the photoelectric sensors 4 detect shackles 12 passing in front of its location and the electronic model in the PLC 2 is updated as to the new position. As a given chicken arrives at the entrance to the automatic rehandler 14, it is separated from its feet and picked up by a trolley 16 on the rehandler 14. When the trolley 16 picks up the chicken, an inductive proximity sensor 18 verifies that a trolley 16 was present at the transition point and transfers the chicken ID to the automatic rehandler 14 model. If a whole bird did not get picked up by a trolley 16, and therefore did not get transferred to the automatic rehandler 14, the status of the feet for that chicken will be set to "Untracked". As the trolley 16 is moved through the automatic rehandler 14, its position is tracked continuously. When the trolley 16 reaches the point at which the chickens are transferred to the eviscerating line 10, a second inductive proximity sensor 20 detects the trolley 16. At this point, the chicken ID is transferred from the automatic rehandler 14 model to the eviscerating line model. The automatic rehandler 14 model uses metal flags 22 mounted on each trolley 16, except for one, to count the trolleys 16 passing above the inductive proximity sensors. The one trolley 16 that does not have the flag is used to maintain synchronization between the actual positions of the trolleys 16 and the trolley positions in the automatic rehandler 14 model. As the eviscerating line 10 moves, the photoelectric sensors 4 detect shackles 12 passing in front of its location and the electronic model in the PLC 2 is updated as to the new position. Directly after the chicken is transferred to the eviscerating line 10, a set of photoelectric sensors 4 is positioned to detect the presence of the whole birds. Because the automatic rehandler 14 will typically fail to successfully transfer about 5% of the whole birds, this set of photoelectric sensors 4 compares which chickens successfully were transferred to the eviscerating line 10 verses the electronic model in the PLC 2. If a given whole bird was not successfully transferred to the correct eviscerating line 10 shackle 12, the system will electronically set the status of the feet that came from that whole bird to "Unknown". The

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system also monitors the presence of the chickens directly before the inspector station locations. Another set of photoelectric sensors 4 compares which chickens are detected at this point to the electronic model in the PLC 2. If a given whole bird is not present and the electronic model shows that a whole bird should be on that shackle 12, the system will electronically set the status of the feet that came from that whole bird to "Unknown". If the picking line 8 stops running and the eviscerating line 10 continues to run, the feet from any given bird may reach the paw or chicken feet harvester before the whole birds have been graded by the inspectors. Because these feet have to be unloaded, the status of the feet whose whole bird have not yet passed by the inspector stations will also be electronically set to "Unknown". When the whole birds pass the inspectors, a determination is made as to whether the feet from that chicken are edible or inedible. If the feet are edible, no action is taken by the inspector. If no action is taken by the operator and the feet from the bird in front of the inspector are not "Unknown", the feet will be sorted to the edible bin. If the feet are determined to be inedible, the inspector will press a button located at their station. This button interfaces with the system and then the system identifies the ID of the whole bird and locates its feet on the picking line. The status of the feet will be electronically set to "Inedible". The key to the invention being able to constantly identify the whole bird and the chicken feet relies on the number of line shackles 12 between tracking points so that the electronic model will exactly match the actual process.

[0029] Additionally, due to the fact that the picking line 8 and the eviscerating line 10 are chains, some wear and stretch will occur over time. The subject invention automatically corrects for this issue by verifying the number of line shackles 12 each time the chains make a revolution through the process. There are large metal flags 22 attached to one shackle 12 on each picking line 8 and eviscerating line 10. As this metal flag 22 passes different points monitored by the system, the electronic model is verified against the actual line data measured by the photoelectric sensors 4 and is changed if some line stretch has occurred.

[0030] With respect to the above description then, it is to be realized that the optimum dimensional relationships for the invention to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

[0031] Thus, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as being new and desired to be protected by Letters Patent of the United States is as follows:

1. An apparatus to electronically automate the sorting of chicken feet in the category of edible or inedible, comprising:

a sensing means for tracking the chicken feet and the associated processed chicken;

a programmable means to track and store information received by said sensing means; and

a communication means between said sensing means and said programmable means.

2. An apparatus according to claim 1, wherein said sensing means comprises at least one photoelectric sensor and at least one inductive sensor.

3. An apparatus according to claim 1, wherein said programmable means comprises a programmable logic card.

4. An apparatus according to claim 1, wherein said communication means comprises a data bus communication cable.

5. An apparatus according to claim 2, wherein said photoelectric sensor monitors chicken line movement and said inductive sensor monitor trolley movement.

6. An apparatus according to claim 1, wherein said programmable means receives reject information from an inspector reject button and compares said reject information to the information received from said sensing means.

7. An apparatus according to claim 1, wherein said programmable means compares said information received from said sensing means to an electronic model stored in said programmable means.

8. A process to electronically automate the sorting of chicken feet in the category of edible or inedible, comprising:

- a) monitoring chicken line movement using at least one photoelectric sensor;
- b) monitoring trolley movement using at least one inductive sensor;
- c) transferring information received from said photoelectric sensor and said inductive sensor to a programming means; and
- d) identifying, when the chicken feet are rejected as inedible, using said programming means, the processed chicken with its associated inedible chicken feet.

9. A process according to claim 8 wherein said programming means is a programmable logic card.

10. A process according to claim 8 wherein said photoelectric sensor monitors line movement and verify the presence of chickens in shackles.

11. A process according to claim 9 wherein said programmable logic card monitors its electronic programmed model of the chicken lines against the actual chicken line data measured by said photoelectric sensor and said inductive sensor.

12. A process to electronically automate the sorting of chicken feet in the category of edible or inedible, comprising:

- a) transferring input data from photoelectric sensors and inductive sensors located at various locations on at least one chicken process line;
- b) receiving said input data from said photoelectric sensors and said inductive sensors into a programming means;
- c) interpreting the data in said programming means and updating the programmed internal electronic model in said programming means;
- d) synchronizing the location of the chicken feet and the location of the processed chicken in a said programming means;
- e) interfacing with the inspector reject button so that when the chicken feet are determined to be inedible, then said programming means identifies the processed chicken and its associated inedible chicken feet.

13. A process according to claim 12 wherein said programming means is a programmable logic card.

14. A process according to claim 12 wherein said photoelectric sensors monitor line movement and verify the presence of chickens in shackles.

15. A process according to claim 13 wherein said programmable logic card monitors its electronic programmed model of the chicken lines against the actual chicken line data measured by said photoelectric sensor and said inductive sensor.

\* \* \* \* \*